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Analysis of the International Competitive Environment of COSCO Shipping Holdings Based on Porter's Five Forces

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Abstract: *Due to the deepening of globalization, Chinese businesses frequently contend with competition from other countries, and thus analysing the global competitive landscape of Chinese businesses is so important. This paper seeks to evaluate the competitive standing of COSCO SHIPPING Holdings Co., Ltd., the biggest container shipping firm in China, and offer suggestions based on Porter's Five Forces model. The analysis's findings indicate that, despite several future uncertainties, the corporation is not under much pressure from its competitors. However, the firm must continue to be prudent in preventing risks and using good business practices. In particular, the firm should preserve an awareness of crisis, expand collaboration along the Belt and Road, and fortify ties with the OCEAN Alliance.*

Keywords: *COSCO Shipping Holdings, Competition, Porter's 5 Forces*

1. Introduction

With its massive volumes, cheap freight rates, and extensive transit routes, marine shipping becomes the most significant means of transportation for international trade and, consequently, the growth of the global economy. Container transportation, dry bulk transportation, oil transportation, and general cargo transportation are some of the subsectors of the marine shipping business. The midstream and downstream transportation of globally traded commodities is handled by container shipping, which has a higher added value because its clients are end users and makers of industrial products. One may argue that without container transportation, globalization would not exist.

After being founded in 2005, COSCO SHIPPING Holdings Co., Ltd. (COSCO SHIPPING Holdings) became public in Shanghai and Hong Kong, China, respectively. The biggest container shipping company in China, COSCO SHIPPING Holdings, is a central business overseen by the State-owned Assets Supervision and Administration Commission of the State Council of PRC. Through the container fleet of its indirect holding subsidiary, Orient Overseas Container Line Ltd. (OOCL), and its fully owned subsidiary, COSCO Shipping Lines, the company primarily engages in container-based cargo transportation and associated activities. In terms of the size of its container fleet, COSCO SHIPPING Holdings is ranked third globally, according Alphaliner figures. In terms of overall shipping capacity, its parent business, China Ocean Shipping (Group) business (COSCO Group), comes in fourth.

COSCO Shipping Holdings has a self-operated container fleet with a capacity of over 2.92 million TEU, approximately 700 container shipping sales and service outlets worldwide, and 291 international routes (including international feeder lines), 56 coastal routes in China, and 84 Pearl River Delta and Yangtze River branch lines that call at 569 ports in approximately 142 countries and regions worldwide, according to the company's semi-annual report.

Since 2019, the emergence of COVID-19 and rising geopolitical tensions have adversely affected the global economy, trade dynamics, and supply chains. These strained supply chains have led to a remarkable surge in the performance of leading shipping companies worldwide. Notably, COSCO SHIPPING Holding has demonstrated particularly impressive results. As indicated in the company's annual reports, its net profit surpassed 10 billion yuan in both 2019 and 2020, while in the subsequent years of 2021 and 2022, it exceeded 100 billion yuan.

As a prominent global corporation with ties to the government, COSCO Group and its subsidiaries encounter numerous controversies, prompting scholars to evaluate its strengths and weaknesses from various angles. Primarily, COSCO Group, being a state-owned entity, faces criticism for its reliance on

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government assistance. The Chinese government actively supports subsidiaries such as COSCO SHIPPING Energy and COSCO SHIPPING Holdings through mechanisms like direct subsidies, equity investments, financing incentives, and favorable policies. Supporting this perspective, Xiong (2022) highlights that COSCO Group's strategic development is often aligned with China's national shipping development agenda, with its achievements being intricately linked to the advancement of China's transportation sector.[1] Furthermore, COSCO Group's growth significantly contributes to China's overall economic progress. Conversely, some researchers express doubts regarding the competitiveness of COSCO Group. Huang et al. (2020) argue that the rapid expansion of China's domestic shipping market fails to foster shipping companies with international competitiveness, suggesting that COSCO Group, as a state-owned entity that captures market share from private competitors, lacks the strength to effectively compete against foreign counterparts.[2]

COSCO Group, as the parent entity, encompasses numerous subsidiaries, among which COSCO SHIPPING Holdings and COSCO SHIPPING Energy stand out as the most prominent publicly traded companies. While existing literature has explored the overall competitive landscape of COSCO Group from multiple perspectives, this paper will specifically examine the competitive dynamics of COSCO SHIPPING Holdings, one of its subsidiaries. Utilizing Porter's five forces framework, the analysis will assess the company's business performance since 2022 and provide relevant recommendations. The paper is structured into three main sections: the first part presents a theoretical framework, the second part details the analytical findings, and the final section offers conclusions and actionable suggestions.

2. Research Theory

Porter introduces the Porter Five Forces Model in his seminal work in 1989, which serves as a framework for examining the competitive dynamics within various industries and firms.[3] This model identifies five key competitive forces that influence a firm's market position: the threat posed by new entrants, the risk of substitute products or services, the intensity of rivalry among current competitors, and the bargaining power held by both suppliers and customers. Several researchers have employed Porter's Five Forces model to assess the competitive landscape of the transportation sector. For instance, Wellner and Lakotta (2020) utilize this framework while incorporating two additional forces—government intervention and complementary support—thereby advancing the study of the German railway industry. [4] Similarly, Wen (2020) applies the model to the international market for specialized ship transportation, highlighting that the competitive environment among existing players is characterized by a monopoly. [5]

3. Analysis Results

3.1. Declining Rivalry among existing industry

The rivalry among current enterprises is predominantly illustrated by the competition between COSCO SHIPPING Holdings and other major global shipping firms. Data from Alphaliner indicates that, as of January 2023, the leading ten shipping companies collectively held an 84.2% share of shipping capacity, with the top five accounting for 64.3% (see Table 1). This suggests that the international shipping market is largely dominated by these prominent companies, and the intensity of competition within the global shipping sector is contingent upon the extent of capacity share controlled by these industry leaders.

Table 1: TOP10 Liners Shipping Capacity & Share in January 2023

Rank	Operator	TEU	Share	Cumulative Share
1	Mediterranean Shg Co	4,626,967	17.6%	17.6%
2	Maersk	4,232,409	16.1%	33.7%
3	CMA CGM Group	3,399,694	12.9%	46.6%
4	COSCO Group	2,865,265	10.9%	57.5%
5	Hapag-Loyd	1,796,154	6.8%	64.3%
6	Evergreen Line	1,662,633	6.3%	70.6%
7	ONE (Ocean Network Express)	1,534,448	5.8%	76.4%
8	HMM Co Ltd	816,365	3.1%	79.5%
9	Yang Ming Marine Transport Corp.	705,614	2.7%	82.2%
10	Zim	533,823	2.0%	84.2%

Data Source: https://alphaliner.axsmarine.com/PublicTop100/

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Following years of both rivalry and collaboration, the predominant shipping firms have established three principal alliances: 2M, OCEAN, and THE. The 2M alliance comprises MSC and the Maersk Group, while OCEAN includes COSCO Group, CMA CGM Group, and Evergreen Line. The THE alliance is made up of Hapag-Lloyd, HMM, ONE, and Yang Ming Marine. Notably, it is evident that the leading nine shipping companies in the global market have become members of these alliances.

Figure 1 illustrates the current distribution of shipping capacity among major alliances. The 2M alliance currently holds the largest share, with a capacity of 8,859,376 TEU, representing 33.7% of the global capacity. This is followed by the OCEAN alliance, which has a capacity of 7,927,592 TEU, equating to 30.1% of the world's total capacity. The THE alliance possesses the smallest capacity, totaling 4,852,581 TEU, which corresponds to 18.4% of the global capacity. Additionally, the COSCO Group contributes 10.9% to the overall capacity, which is approximately one-third of that of the OCEAN alliance, with the majority of this capacity being supplied by COSCO SHIPPING Holdings.

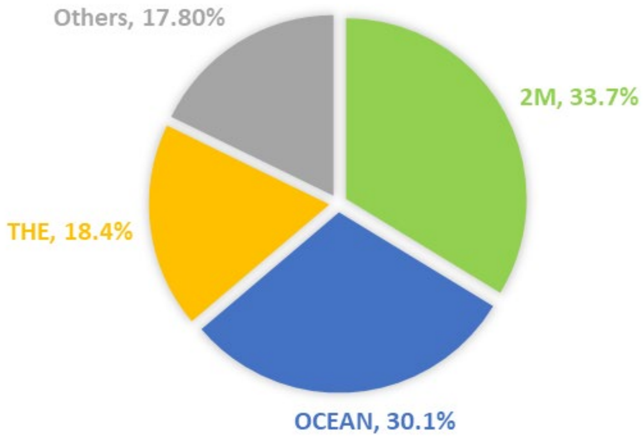

Figure 1: World Shipping Capacity Share 2023

Maersk reveals that MSC and Maersk, recognized as two of the largest container shipping entities in the world, will end their current collaboration starting January 2025. This development signifies the formal dissolution of the 2M alliance in 2025. In the absence of significant shifts in the global shipping market, particularly if new shipbuilding orders do not see considerable increases, the OCEAN Alliance, associated with COSCO Group, is expected to emerge as the largest shipping market alliance globally. This transition is likely to enhance the alliance's control over the international shipping market and improve the global competitiveness of COSCO SHIPPING Holdings. Figure 2 illustrates the projected shipping capacity distribution among leading alliances and shipping companies in 2025.

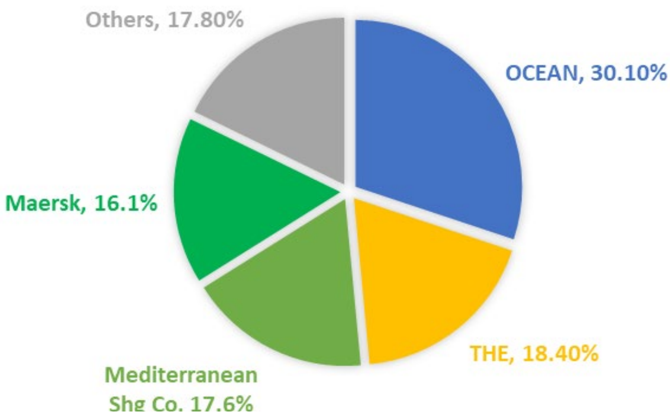

Figure 2: World Shipping Capacity Share 2025 (projection)

The alliance's pricing coordination mechanism and the collective utilization of liner cargo warehouses significantly enhance the propensity for collaboration among its member shipping companies, overshadowing their competitive tendencies. In contrast, firms from different alliances are more likely to engage in competition. COSCO SHIPPING Holdings reports that the OCEAN Alliance launched a

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new service on the DAY6 route in January 2022, which included upgrades to eight existing routes and the introduction of three new routes, resulting in a total of 42 routes and a combined capacity of 4.43 million TEUs. Additionally, the alliance is dedicated to leveraging its strengths in stable collaboration, a wide range of services, and flexible responsiveness to deliver consistent and dependable services to its clientele. Ultimately, the competitive landscape faced by COSCO SHIPPING Holdings may gradually lessen as the allocation of shipping capacity among the world's leading shipping firms undergoes transformation.

3.2. Weak bargaining power of suppliers

COSCO SHIPPING Holdings primarily relies on suppliers from the container manufacturing and shipbuilding sectors. The majority of containers globally are manufactured in China, which allows COSCO SHIPPING Holdings to easily procure container resources. As a result, the supply of containers is generally ample, leading to a weaker bargaining position for upstream container manufacturers. Additionally, COSCO SHIPPING Development, a subsidiary of COSCO Group, is involved in the production of containers, which may create synergistic benefits that further lessen the bargaining power of competing container manufacturers. In the realm of shipbuilding, COSCO SHIPPING Heavy Industry Co., Ltd., another subsidiary of COSCO Group, has the capacity to produce large container ships with a 20,000 TEU capacity for COSCO SHIPPING Holdings, contributing to further synergies within the group. Overall, COSCO Group has developed a vertically integrated framework in the upstream portion of the industry, which has considerably weakened the negotiating power of suppliers relative to COSCO SHIPPING Holdings.

3.3. Weak Bargaining power of customers

Marine shipping is an essential component of international trade, characterized by a relatively uniform nature of shipping services. Consequently, the bargaining power of customers is influenced by the dynamics of supply and demand within each specific market segment. Based on the data presented in the annual reports, the primary source of operating income for COSCO SHIPPING Holdings is derived from its container transportation services to regions including America, Europe, Asia-Pacific, and other international markets (see Figure 3). Consequently, the bargaining power of its customers is influenced by the dynamics of supply and demand within these specific market segments.

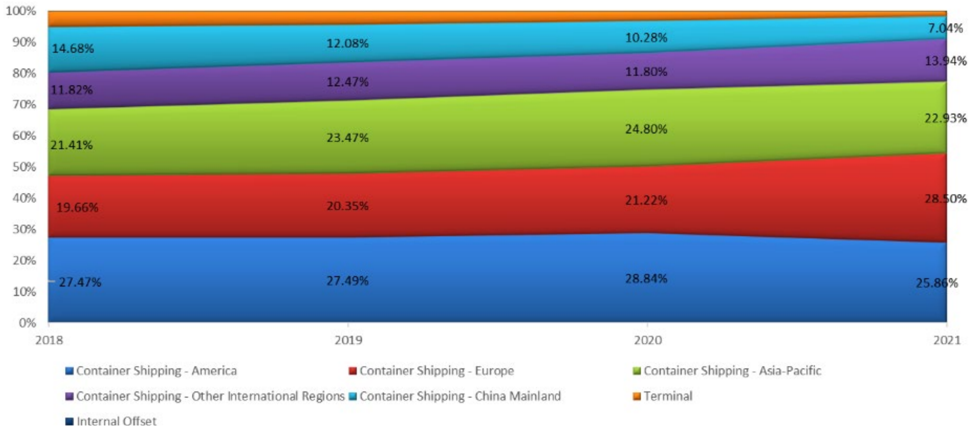

Figure 3: Operational Income of COSCO SHIPPING Holdings.

Freight rates serve as a fundamental metric that illustrates the dynamics of supply and demand within the maritime shipping sector. A significant freight index pertinent to the operations of COSCO SHIPPING Holdings is the China Containerized Freight Index (CCFI). This index represents a relative figure that indicates the trends and extent of price fluctuations for containerized cargo exported from Chinese ports. The CCFI was initially developed and published by the Shanghai Shipping Exchange in 1998. Furthermore, the CCFI has been included in the UNCTAD Shipping Annual Report, functioning as a "barometer" for the container shipping industry in China and globally.

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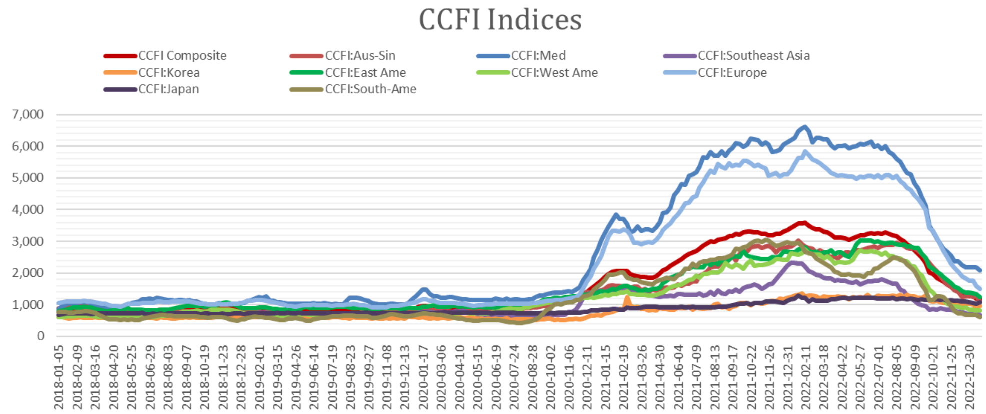

Figure 4: CCFI Indices

The data presented in Figure 4 indicates a significant rise in the CCFI Composite since November 2020, marking the onset of an unprecedented boom cycle within the maritime sector. This development suggests a reduction in the overall bargaining power of global customers over the past three years. An analysis of the freight rate trends across various CCFI routes reveals that the European market has experienced the most substantial increase in freight rates, followed by the American market and the Asia-Pacific market. Consequently, European customers exhibit the least bargaining power, American customers possess relatively diminished bargaining power, while Asia-Pacific customers maintain the strongest bargaining power.The mismatch between supply and demand in the past 3 years was mainly due to the disruption of global supply chains by COVID-19, the stimulation policies of consumption in various countries, the time lag on investment in containerships, and geopolitical conflicts. This mismatch has caused great damage to the bargaining power of the company's customers.

3.4. Weak Threat from new entrants

New entrants in the maritime sector are characterized as newcomers to the market, yet their potential threat to COSCO SHIPPING Holdings is mitigated by the substantial barriers to entry inherent in the industry, which are reflective of the capital-intensive nature and prolonged operational cycles typical of shipping.

Firstly, established shipping corporations possess considerable asset bases and extensive industry experience. For instance, COSCO SHIPPING Holdings's parent entity, COSCO Group, established in 1961, operates a fleet of over 170 vessels. Similarly, the renowned Maersk Group, which originated in 1904 through Dampskibsselskabet Svendborg, boasts a fleet exceeding 340 ships. Hapag-Lloyd, another prominent player, launched its first vessel in 1847 and currently manages a fleet of more than 100 ships. Over the years, the leading five shipping companies have developed substantial container fleets, each comprising over 100 vessels, thereby establishing a significant competitive advantage that emerging shipping firms cannot match. Secondly, the cyclical nature of the shipping industry poses significant challenges for survival, thereby creating an inherent barrier for new entrants. Research conducted by Stopford, the founder of Clarkson, indicates that business cycles within the maritime sector typically extend beyond a decade, a duration that is often untenable for most newcomers. [6]

3.5. Weak Threat of substitutes

The shipping sector, as previously noted, benefits from comparatively lower costs and greater capacity in relation to alternative transportation methods such as rail, air, and road. Furthermore, international shipping accounts for over 80% of the total transportation volume in global trade, significantly influencing the advancement of the global economy and trade dynamics. Consequently, the shipping services offered by COSCO SHIPPING Holdings currently face no substantial threats from substitute options. In addition, maritime transport is the most energy-efficient of all modes of transport. Ships use far less energy per tonne-kilometer than planes and trucks on long-distance voyages. As global attention to environmental protection and reducing carbon emissions increases, this advantage of maritime transport becomes even more important. Finally, the global shipping industry has recently witnessed the establishment of several formidable alliances among major shipping companies, following an extensive period of development and integration. These alliances facilitate the optimization of resource allocation through the sharing of routes and space, thereby enhancing operational efficiency and bolstering market competitiveness. New alternative technologies attempting to penetrate this sector are likely to encounter significant resistance from these well-established alliances. The existing shipping leaders benefit from extensive industry experience and a vast customer base, while also leveraging economies of scale to minimize costs, thus securing a competitive advantage in pricing strategies. Furthermore, the backing of governmental policies and international trade regulations adds an additional layer of security for traditional shipping operations. In conclusion, considering the critical role of shipping in global trade and the substantial barriers that have been established within the industry, it can be argued that prominent shipping firms, such as COSCO Shipping Holdings, experience relatively low pressure from potential competitors. Although new modes of transportation or technological advancements may arise in the future, it is unlikely that these developments will significantly disrupt the current shipping landscape in the short term. Consequently, COSCO Shipping Holdings is anticipated to sustain steady growth and retain its dominant position in the international shipping market over the long term.

4. Conclusion & Recommendations

This essay has reached a conclusion that COSCO SHIPPING Holdings' competitive landscape within its industrial chain is relatively favorable, owing to the weak bargaining power of upstream suppliers, the projected improvement in intra-industry competition after 2025, and the relatively weak bargaining power of customers. Moreover, the external threats from potential new entrants and substitute products are deemed insignificant. Furthermore, COSCO SHIPPING Holdings' status as a large central enterprise in China affords it financial and policy support from the government, contributing to its competitive advantage.

COSCO SHIPPING Holdings, as a shipping enterprise, faces challenges stemming from the cyclical nature of the shipping industry, resulting in unstable earnings growth. Additionally, various uncertainties threaten the company's operational stability, including anticipated economic recessions, exchange rate volatility, the ongoing impact of COVID-19, labor strikes at foreign terminals, trade tensions between China and the United States, environmental regulations set by the International Maritime Organization (IMO), governmental interventions, shifts in geopolitical dynamics, and rising fuel prices.

Considering these observations, this essay proposes several recommendations. Firstly, COSCO SHIPPING Holdings should enhance collaborative initiatives within the OCEAN Alliance and leverage the merger and acquisition expertise of OOCL to secure high-quality shipping assets, thereby positioning itself advantageously for future competition. Secondly, the company ought to capitalize on its status as a state-owned enterprise (SOE) by further developing policy-driven sectors along the Belt and Road Initiative and the China-Europe express routes, while also expanding its international industrial chain footprint and innovating new revenue streams. Lastly, it is crucial for management to maintain a heightened awareness of risks and crises, actively pursue the development of counter-cyclical business strategies, and ensure stable performance growth. Concurrently, they should remain vigilant regarding international developments, legal changes, and IMO regulations to effectively manage risks.

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